PROFESSIONAL LASER SHOW SYSTEM
DIFFRACTION LASER

G018ED

MANUAL AND USER GUIDE

Distributed By;
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GENERAL INSTRUCTIONS

IMPORTANT NOTE

This manual / user guide is part of the product and should be retained with the unit for future reference and passed on with the product if sold on. Please carefully read this manual / user guide before use.

Unpacking Your Laser

The box should contain the following items;

1 x Diffraction Laser
1 x Mains Lead
1 x Manual / User Guide

Please examine the product carefully and if any damage is found DO NOT use and contact your supplier immediately to report the damage.

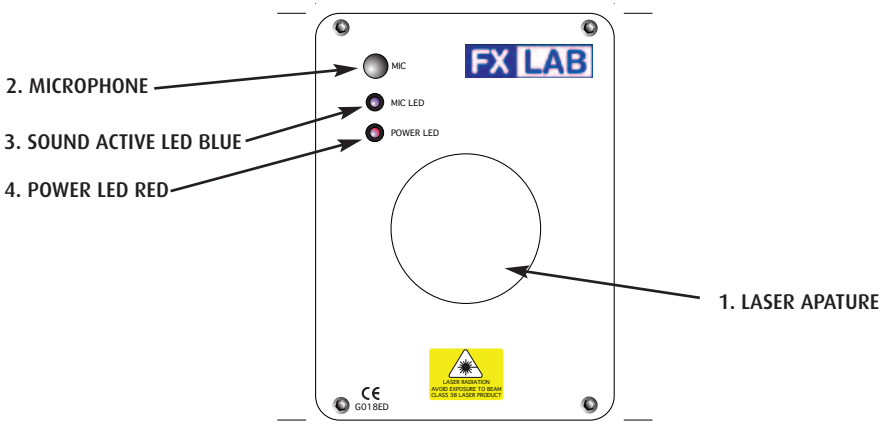
Warnings

1. This is a class 3B laser product. It is intended for professional use only and is not a domestic product.
2. Always use your laser in accordance with the GUIDANCE laid down in HS(G)95 "The Radiation Safety of Lasers Used for Display purposes". This is published by the UK Health and Safety Executive.
3. There are no user serviceable parts in this product. All servicing and repairs must be undertaken by a competent engineer.
4. This product must be earthed.
5. For Indoor Use Only.
6. Avoid contact with water and other liquids and away from extremes of heat and cold.
7. Store in a cool dry place.
8. Always replace the fuse with the same size and value, see label on product for exact type.
9. Clean only with a damp cloth. DO NOT use detergents or other cleaning agents.
10. Do not drop or knock this product.

Do's and Dont's

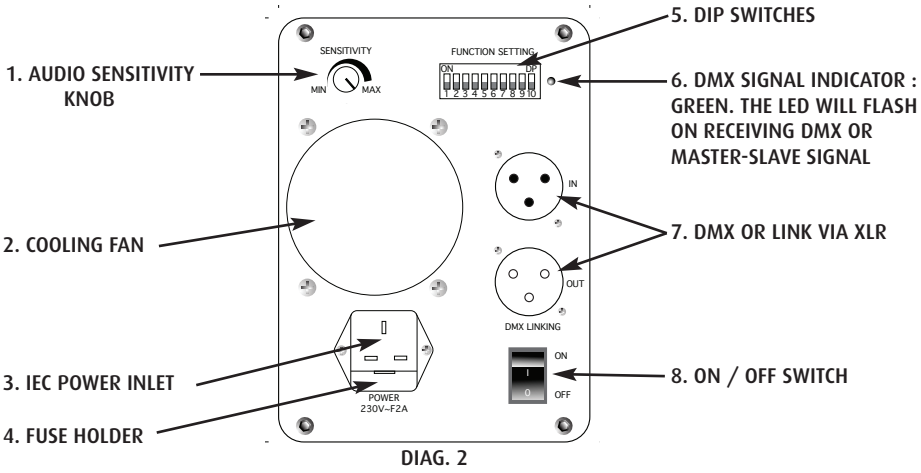
1. Do Not switch the product on and off continuously. This can damage the product.
2. To increase the life of the laser diodes use the product in short 10 minute bursts. Do not run the laser for more than 4 hours continuously. This will **seriously** shorten the life of the diodes.
3. Do Not drop or knock the product. Always transport the unit in a robust case.
4. Make sure the unit is securely positioned before use.

FRONT PANEL



DIAG. 1

REAR PANEL



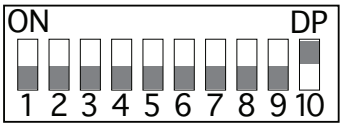
DIAG. 2

FUNCTIONS AND SETTINGS

Your laser can be controlled from several sources all of which can be accessed using the dip switch panel on the rear of the unit (see Diag 2).

Sound Activated

For sound activated operation follow the instructions below.

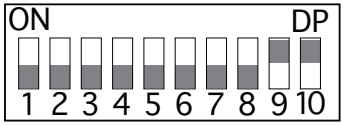


1. Set DIP switches to above settings.
2. Use the sound adjustment knob on the rear of the product to increase / decrease the sound sensitivity of the product to the sound level.

NOTES

When in this mode the laser will switch off after 8 seconds if the sound stops or falls below the preset level. The laser will start when the sound starts.

Auto Mode

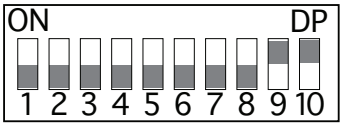


1. Set DIP switches to above settings.
2. The product will now cycle through a selection of built-in programs.

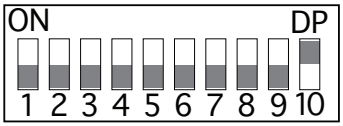
Master - Slave Mode

Set master unit using appropriate DIP switch settings below.

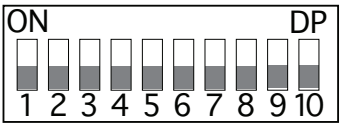
Master DIP switch setting for running in AUTO Mode.



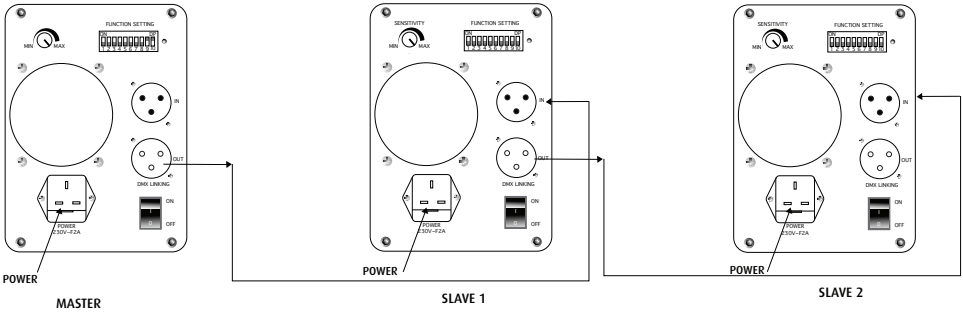
Master DIP switch setting for running in Sound To Light Mode.



Slave Settings



1. The first laser in the chain is the master. The dip switch settings should be set as per the settings shown on the opposite page.
2. The next laser(s) in the chain are the slave units. They should be set as per the slave settings shown above.
3. Link the units together using high quality 3 pin DMX cable (see Diag 3).
4. Switch on the units in order of connection.



DIAG. 3

NOTES

1. Upto 32 units can be connected together in this way. Always use high quality 3 pin DMX leads and use a DMX terminator on the last unit in the chain.
2. The slave units will mimic the master unit.
3. When in this mode and operating to sound you will need to adjust the sensitivity of the master unit only.

External DMX 512 Control

The unit can be controlled by most standard DMX512 controller. Always read the controller user manual before attempting to use the laser.

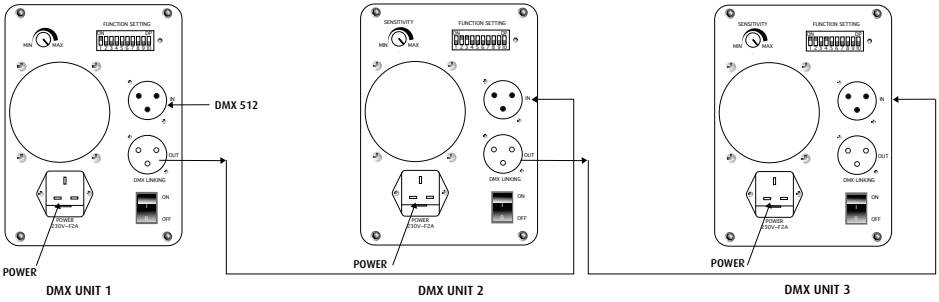
To use the lasers with a DMX controller they will need to be linked together using high quality 3 pin DMX cable (see Diag 4).

For setup follow instructions below;

1. For DMX mode an address must be set on each unit between the values of 1 and 512. To set an address using the dip switches you add together the values

of the switches (see Diag 6) turned on . Therfore to set channel 1 you would turn switch 1 on and all others off (see Diag 7). For the second unit in the chain if you wish to have it do the same as the first unit you would give it the same DMX address otherwise you will need to allocate 5 channels for number 1 so the next unit must have an address of 6 which is dip switches 2 and 3 ON (see Diag 7). You would continue on till all units have been addressed.

2. Site the units securely before connecting and powering up.
3. Connect the units and the controller before switching the power on. Always use high quality DMX leads and use a DMX terninator on the final unit in the chain.
4. Upto 32 units can be connected together in a single chain.



DIAG. 4

Channel	Function	Value	Description
CH1	Mode	0 - 49	Laser OFF
		50 - 99	DMX Mode
		100 - 149	Sound Actvated Mode
		150 - 255	AUTO Mode
CH2	Running Direction	0 - 99	Clockwise Rotation
		100 - 199	No Rotation
		200 - 255	Counter Clockwise Rotation
CH3	Running Speed	0 - 255	0 Fast, 255 Slow
CH4	Twinkle Speed	0 - 255	0 Fast, 255 Slow
CH5	Colour Selection	0 - 99	Red + Green
		100 - 199	Red
		200 - 255	Green

Note : When CH1 is set to DMX (value 50 -100), CH2,CH3,CH4 and CH5 can be used otherwise altering CH2,CH3,CH4 and CH5 has no effect.

DIAG. 5

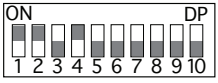
0=OFF 1=ON X=ON OR OFF

DIPSWITCH CHART										FUNCTION
#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	
1	2	4	8	16	32	64	128	256	DMX OFF	DMX VALUE
X	X	X	X	X	X	X	X	0	1	SOUND ACTIVATED
X	X	X	X	X	X	X	X	1	1	AUTO MODE
SET DMX ADDRESS FOR DMX MODE									0	DMX SLAVE

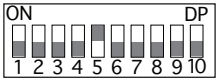
DIAG. 6

DMX Address 1

DMX Address 6



DMX Address 11



DMX Address 16

DIAG. 7

DMX QUICK REFERANCE CHART

DMX : DIPSWITCH SET 0=OFF 1=ON X=OFF OR ON					#9	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
					#8	0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1
					#7	0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1
					#6	0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1
#1	#2	#3	#4	#5																	
0	0	0	0	0			32	64	96	128	160	192	224	256	288	320	352	384	416	448	480
1	0	0	0	0		1	33	65	97	129	161	193	225	257	289	321	353	385	417	449	481
0	1	0	0	0		2	34	66	98	130	162	194	226	258	290	322	354	386	418	450	482
1	1	0	0	0		3	35	67	99	131	163	195	227	259	291	323	355	389	419	451	483
0	0	1	0	0		4	36	68	100	132	164	196	228	260	292	324	356	390	420	452	484
1	0	1	0	0		5	37	69	101	133	165	197	229	261	293	325	357	391	421	453	485
0	1	1	0	0		6	38	70	102	134	166	198	230	262	294	326	358	392	422	454	486
1	1	1	0	0		7	39	71	103	135	167	199	231	263	295	327	359	393	423	455	487
0	0	0	1	0		8	40	72	104	136	168	200	232	264	296	328	360	394	424	456	488
1	0	0	1	0		9	41	73	105	137	169	201	233	265	297	329	361	395	425	457	489
0	1	0	1	0		10	42	74	106	138	170	202	234	266	298	330	362	396	426	458	490
1	1	0	1	0		11	43	75	107	139	171	203	235	267	299	331	363	397	427	459	491
0	0	1	1	0		12	44	76	108	140	172	204	236	268	300	332	364	398	428	460	492
1	0	1	1	0		13	45	77	109	141	173	205	237	269	301	333	365	399	429	461	493
0	1	1	1	0		14	46	78	110	142	174	206	238	270	302	334	366	400	430	462	494
1	1	1	1	0		15	47	79	111	143	175	207	239	271	303	335	367	401	431	463	495
0	0	0	0	1		16	48	80	112	144	176	208	240	272	304	336	368	402	432	464	496
1	0	0	0	1		17	49	81	113	145	177	209	241	273	305	337	369	403	433	465	497
0	1	0	0	1		18	50	82	114	146	178	210	242	274	306	338	370	404	434	466	498
1	1	0	0	1		19	51	83	115	147	179	211	243	275	307	339	371	405	435	467	499
0	0	1	0	1		20	52	84	116	148	180	212	244	276	308	340	372	406	436	468	500
1	0	1	0	1		21	53	85	117	149	181	213	245	277	309	341	373	407	437	469	501
0	1	1	0	1		22	54	86	118	150	182	214	246	278	310	342	374	408	438	470	502
1	1	1	0	1		23	55	87	119	151	183	215	247	279	311	343	375	409	439	471	503
0	0	0	1	1		24	56	88	120	152	184	216	248	280	312	344	376	410	440	472	504
1	0	0	1	1		25	57	89	121	153	185	217	249	281	313	345	377	411	441	473	505
0	1	0	1	1		26	58	90	122	154	186	218	250	282	314	346	378	412	442	474	506
1	1	0	1	1		27	59	91	123	155	187	219	251	283	315	347	379	413	443	475	507
0	0	1	1	1		28	60	92	124	156	188	220	252	284	316	348	380	414	444	476	508
1	0	1	1	1		29	61	93	125	157	189	221	253	285	317	349	381	415	445	477	509
0	1	1	1	1		30	62	94	126	158	190	222	254	286	318	350	382	416	446	478	510
1	1	1	1	1		31	63	95	127	159	191	223	255	287	319	351	383	417	447	479	511

TECHNICAL SPECIFICATIONS

VOLTAGE.....230V~50HZ 20W
FUSE.....F2A/250V 5 x 20 mm
LASERS.....532nm / 50mW Green
.....650nm / 100mW Red
WORKING MODES .....Sound Activated, DMX, AUTO, Master-Slave
INTERFACES.....3 Pin XLR for DMX / Master-Slave linking
EFFECTS .....Over 500 Beams
DIMENSIONS .....100x 300 x 200mm
WEIGHT.....3.2Kg

WARNING

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